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TRANSMITTAL OF APPEAL BRIEF (Large Entity)	Docket No. ITL.0489US

In Re Application Of: **WERNER METZ**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
09/836,978	April 18, 2001	Srilakshmi K. Kumar	21906	2629	9073

Invention: **LOCATING A POSITION ON A DISPLAY SCREEN**

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Applicant:	Werner Metz	§	Group Art Unit:	2629
Serial No.:	09/836,978	§	Examiner:	Srilakshmi K. Kumar
Filed:	April 18, 2001	§		
For:	LOCATING A POSITION ON A DISPLAY SCREEN	§	Atty. Dkt. No.:	ITL.0489US (P10269)

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Stephanie Petreas

TABLE OF CONTENTS

I. REAL PARTY IN INTEREST

The real party in interest is the assignee Intel Corporation, the assignee of the present application by virtue of the assignment recorded at Reel/Frame 011734/0824.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals and interferences.

III. STATUS OF CLAIMS

Claims 1, 5-11, 14, 17-21, 26-28, and 30 stand rejected. The rejections of all pending claims 1, 5-11, 14, 17-21, 26-28, and 30 are being appealed.

IV. STATUS OF AMENDMENTS

All amendments have been entered. No amendment has been filed subsequent to the final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

At this point, no issue has been raised that would suggest that the words in the claims have any meaning other than their ordinary meanings. Nothing in this section should be taken as an indication that any claim term has a meaning other than its ordinary meaning.

Referring to Figure 1, a sequence of computer display screen frames 10 are shown. In this case, a frame 10 (or a portion of a frame) may be divided geometrically into a plurality of regions 12 through 18. The frame 10 may be divided into regions 12, 14, 16 and 18, each of which is assigned a particular detectable characteristic such as a color value. In Figure 1, the letter R represents the color red, the letter B represents the color blue, and the letter G represents the color green.

Each of a plurality of regions 12-18 within a frame 10 are assigned a particular detectable characteristic. This characteristic may be a color, a gray scale value or even a non-visual characteristic such as an infrared or near infrared value. A spatial characteristic may be detected to uniquely determine the location of a sensor tuned to detect that characteristic. The detection of the characteristic may be utilized to determine the position of a sensor such as a light pen. *See* specification, pp. 3-4.

Thus, referring to Figure 1, in one embodiment, each of the regions 12 through 18 is assigned one of three different characteristic values at three different times. The three characteristic values create a unique sequence distinguishable from the sequences used in other regions 14-18. For example, at a first instance, shown in the block on the left in Figure 1, the region 12 is assigned a red value, in the next instance the region 12 is assigned a green value and in the last instance, shown in the block on the right, the region 12 is assigned the blue value. Thus, if a light sensor detects the sequence red-green-blue, there can be no doubt that the light sensor is positioned over the region 12.

A unique sequence of three colors may be selectively assigned to each of the four regions 12-18 at three different time periods to create a sequence that uniquely identifies one of four regions 12-18. The region 12 may be associated with the sequence R-G-B, the region 14 may be associated with the sequence G-B-R, the region 16 may be associated with the sequence B-R-G, and the region 18 may be associated with the sequence R-R-B in one embodiment. Thus, while the characteristic, such as a color, of any region may not in itself be unique, a unique time sequence is assigned to each of the regions 12-18 to enable each region to be uniquely identified.

A sensor that senses the unique sequence is necessarily situated over the corresponding region 12-18.

Once the location of the sensor is identified with respect to a region 12-18, the corresponding region may then be resolved into a sequence of subregions. Specific characteristics may be assigned to each subregion and a sequence of characteristics to further resolve the location of the sensor within the previously identified subregions. This may be followed by a similar division of the subregion into a subsubregions and so on. *See* specification, pp. 4-5.

In accordance with another embodiment of the present invention, shown in Figure 2, a plurality of frames 10a may be subdivided into regions 12a-18a. In this case, a characteristic, such as a color assigned to each region 12a-18a, varies between only two values. The number of frames 10a in a location determining sequence is then increased. As an example, one may assign the sequence R-R-G-R-R to the region 12a, the sequence G-R-R-R-G to the region 14a, the sequence R-G-R-R-G to the region 16a, and the R-R-R-R-G to the region 18a. Thus, each region 12a-18a may have a sequence that is uniquely time coded. *See* specification, pp. 5-6.

Referring to Figure 3, a system 20 displays images and detects the position of a sensor 42 such as a light pen on a display 11. A processor 22 may be coupled to a bridge 24 in one embodiment. The bridge 24 may be coupled to a system memory 26 and a display 11 through a display controller 28. Similarly, the bridge 24 may be coupled to a bus 30 in turn coupled to another bridge 32. The bridge 32 may include a storage device 34 that stores a software program 36. The bridge 32 may also coupled through a bus 38 to a serial input/output (SIO) device 40 in turn coupled to a sensor 42. The sensor 42 may be a light pen.

Referring to Figure 4, a flow chart for the software 36, in accordance with one embodiment of the present invention, begins by displaying a conventional frame as indicated in block 44. After a conventional frame has been displayed, a position locating frame 10 or 10a of the type shown in Figures 1 and 2 may be interspersed within conventional frames, as indicated in block 46. A check at diamond 48 determines whether a particular characteristic associated with regions 12-18 or 12a-18a has been detected. When the characteristic has been detected for each region 12-18 or 12a-18a, the characteristic for each region is recorded as indicated in block 50. A check at diamond 52 determines whether the last position locating frame 10, 10a has now

been displayed, for example interspersed with conventional frames. If so, the flow ends. *See* specification, pp. 6-8

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Each of the following grounds of rejection are presented for review:

(1) claims 1, 5-11, 14, 17-21, 26-28, and 30 stand rejected under 35 U.S.C. § 103(a) over Mumford and Wiebe

A. claims 1, 6-7, 9, 11, 14, 17, 19-21, 27 and 30 stand rejected under 35 U.S.C. § 103(a) over Mumford and Wiebe

B. claims 5 and 26 stand rejected under 35 U.S.C. § 103(a) over Mumford and Wiebe

C. claims 8, 18 and 28 stand rejected under 35 U.S.C. § 103(a) over Mumford and Wiebe

D. claim 10 stands rejected under 35 U.S.C. § 103(a) over Mumford and Wiebe

VII. ARGUMENT

(1) Claims 1, 5-11, 14, 17-21, 26-28 and 30 Are Patentable Under 35 U.S.C. §103(a) over U.S. Patent No. 6,377,249 (Mumford) in view of U.S. Patent No. 6,689,966 (Wiebe)

A. Claims 1, 6-7, 9, 11, 14, 17, 19-21, 27 and 30 Are Patentable Under 35 U.S.C. §103(a) Over Mumford and Wiebe

Pending claims 1, 6-7, 9, 11, 14, 17, 19-21, 27 and 30 stand rejected under 35 U.S.C. §103(a) over U.S. Patent No. 6,377,249 (Mumford) in view of U.S. Patent No. 6,689,966 (Wiebe). This rejection is improper, and should be reversed, as neither reference teaches or suggests all claim limitations, and thus a *prima facie* case of obviousness cannot be established. MPEP §2143.03. With regard to claim 1, neither reference teaches or suggests generating a different sequence of characteristic values each corresponding to a unique sequence of primary colors in each of at least two regions of a display *until* the position of a sensor with respect to the regions is determined, as recited by claim 1.

In this regard, Mumford does not teach generating such a sequence in each region until the position of a sensor is determined. Instead, Mumford teaches that when it is determined that a sensor is not within a particular region of the display, values are no longer generated for that region. Mumford, col. 17, lns. 41-47. Such termination of sequence generation continues for each region in which it is determined that the sensor is not located. *Id.* at col. 18, lns. 23-44. Accordingly, Mumford does not teach "generating a different sequence ... *in each of said regions until the position*" is determined (emphasis added). In addition, Wiebe is entirely silent on any position determination method, as instead Wiebe is merely directed to coding of a pattern with positional information.

Furthermore, neither reference teaches or suggests generating a unique sequence of primary colors in each of multiple regions. In this regard, Mumford nowhere teaches such a unique sequence of primary colors. Instead, Mumford only teaches that the pixels generated on a display are a known overall color or grayscale value. Mumford, col. 6, lns. 10-15. However, neither of such values is a primary color. Furthermore, Wiebe nowhere teaches or suggests generating color information whatsoever. Instead, the positional information coded by Wiebe is in the form of symbols having a single value. Wiebe, cols. 10-12.

For at least these reasons, the cited references, either alone or in combination fail to teach or suggest all claim limitations of claim 1. Accordingly, a *prima facie* case of obviousness has not been made, and claim 1 and its dependent claims are patentable over the proposed combination. For at least the same reasons, independent claims 11 and 20 and the above-listed dependent claims are similarly patentable over the proposed combination and the rejection should be reversed.

B. Claims 5 and 26 Are Patentable Under § 103(a) Over Mumford In View of Wiebe

Dependent claims 5 and 26 also stand rejected under § 103(a) over Mumford in view of Wiebe. This rejection is improper at least for the same reasons described above with regard to claim 1. The rejection of claim 5 is further improper, as the cited references nowhere teach or suggest generating a different sequence of *only two color values* in each of multiple regions of a display. In this regard, the Examiner refers to Mumford, and more particularly column 17, where Mumford teaches generating a color screen with known color, grayscale, or luminance values. However, nowhere does this or any other portion of Mumford teach that such values correspond to a different sequence of only two color values. Instead, Mumford teaches there may be many more than two color values. *E.g.*, Mumford, FIG. 26; col. 20. Further, as described above, Wiebe nowhere teaches position discrimination based on color. For these further reasons, the rejection of claims 5 and 26 is improper and should be reversed.

C. Claims 8, 18 and 28 Are Patentable Under 35 U.S.C. § 103(a) Over Mumford In View of Wiebe

Claims 8, 18 and 28 stand rejected under § 103(a) over Mumford in view of Wiebe. This rejection is further improper, as the cited references nowhere teach or suggest displaying a time sequence of frames each including at least two regions, and each of the regions displaying a time sequence of characteristic values. To support this rejection, the Examiner contends that Mumford teaches the subject matter, referring to columns 17-19 of Mumford. However, as described above (*see* VII(1)(a)) this portion of Mumford merely teaches that when a display portion is not selected, it no longer presents any position information. Further, the portions of the display that continue to display position information are segmented differently. That is, there

is no time sequence of frames each including multiple regions, each of which displays a time sequence of characteristic values. Instead, position information in every frame in Mumford is of a different region and therefore is not of a time sequence of characteristic values. Because Wiebe neither teaches nor suggests anything in this regard, the rejection is improper and should be reversed.

D. Claim 10 Is Patentable Under 35 U.S.C. § 103(a) Over Mumford In View of Wiebe

Claim 10 stands rejected under §103(a) over Mumford in view of Wiebe. In addition to the reasons discussed above regarding claim 1 (*see* VII(1)(a)), the rejection of dependent claim 10 is further improper, as the cited references nowhere teach or suggest developing a sequence using fewer characteristic values than the number of regions. In this regard, the Examiner refers to column 18 of Mumford for this alleged teaching. However, a close review of this portion of Mumford indicates that there are at least as many characteristic values as number of regions in which a screen is segmented. Mumford, col. 18, lns. 9-14. For example, as shown in Figure 26 of Mumford when a screen is divided into eight regions, there are eight characteristic values. As such, there is no teaching or suggestion to develop a sequence with fewer characteristic values than number of regions. Further, as conceded by the Examiner, there is nothing in Wiebe that teaches or suggests this claimed subject matter. For this further reason, claim 10 is patentable and the rejection should be reversed.

Applicant respectfully requests that each of the final rejections be reversed and that the claims subject to this Appeal be allowed to issue.

Respectfully submitted,

Date: 6/16/06

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VIII. CLAIMS APPENDIX

The claims on appeal are:

Claim 1: A method comprising:

resolving a display into at least two regions; and

generating a different sequence of characteristic values each corresponding to a unique sequence of primary colors in each of said regions until the position of a sensor with respect to said regions is determined.

Claim 5: The method of claim 1 including generating a different sequence of only two color values.

Claim 6: The method of claim 1 including displaying a series of frames and interspersing, among said frames, additional frames having at least two regions each displaying a sequence of characteristic values.

Claim 7: The method of claim 6 including displaying said additional frames such that they are substantially undetectable by the user.

Claim 8: The method of claim 1 including generating a different sequence of characteristic values by displaying a time sequence of frames each including at least two regions, and each of said regions displaying a time sequence of characteristic values.

Claim 9: The method of claim 8 including interspersing frames containing said characteristic values and frames not containing said characteristic values.

Claim 10: The method of claim 1 including developing a sequence using fewer characteristic values than the number of regions.

Claim 11: An article comprising a medium storing instructions that enable a processor-based system to:

resolve a display into at least two regions; and

generate a different sequence of characteristic values each corresponding to a unique sequence of primary colors in each region until the position of a sensor with respect to said regions is determined.

Claim 14: The article of claim 11 further storing instructions that enable the processor-based system to generate a different sequence of only two color values in each region.

Claim 17: The article of claim 11 further storing instructions that enable the processor-based system to cause a series of frames to be displayed while interspersing, among said frames, additional frames having at least two regions each displaying a sequence of characteristic values.

Claim 18: The article of claim 11 further storing instructions that enable the processor-based system to generate the different sequence of characteristic values by displaying a time sequence of frames each including at least two regions, and each of said regions displaying a time sequence of characteristic values.

Claim 19: The article of claim 18 further storing instructions that enable the processor-based system to intersperse frames containing said characteristic values and frames not containing said characteristic values.

Claim 20: A system comprising:

a processor; and

a memory coupled to said processor, said memory storing instructions that enable the system to resolve a display into at least two regions and generate a different sequence of characteristic values each corresponding to a unique sequence of primary colors in each region until the position of a sensor is determined.

Claim 21: The system of claim 20 wherein the display is coupled to said processor.

Claim 26: The system of claim 20 wherein said memory stores instructions that enable the system to generate a different sequence of only two color values in each region.

Claim 27: The system of claim 20 wherein said memory stores instructions that enable the system to cause a series of frames to be displayed while interspersing, among said frames, additional frames having at least two regions each displaying a sequence of characteristic values.

Claim 28: The system of claim 20 wherein said memory stores instructions that enable the system to generate a different sequence of characteristic values by displaying a time sequence of frames each including at least two regions, and each of said regions displaying a time sequence of characteristic values.

Claim 30: The system of claim 20 wherein said sensor is a light sensor that detects a characteristic value in the form of light.

IX. EVIDENCE APPENDIX

There is was no evidence submitted during prosecution.

X. RELATED PROCEEDINGS APPENDIX

There are no related proceedings.